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Two Roles of History and Two Ways to Compare History of Economics and History of Philosophy

History of economics is not considered as the core of economics, which is supposed to be the theory of general equilibrium and game theory (one can add the theory of social or collective choice). Econometrics is in the second circle, providing theory with empirical data, and experimental economics and neuroeconomics are newborn marginal fields, a bit heterodox in their inspiration.

History of economics is supposed to be an ancillary discipline, but can be taken either as a way of criticizing the mainstream, or from the orthodox point of view.

In the second case, the historian uses methods of history and history of science in order to show through which steps economics has been developed until it comes to its supposed acme (the combination of general equilibrium and game theory).

In the first one, the historian pays attention to ways of thinking that have beenleft aside in this development and evaluates the theoretical cost of such giving up – mainly, the inadequacy of economics with real social interactions. Pascal Bridel knows very well the details and limits of the theory of the generalequilibrium. At the same time, he uses the methods of history to examine what were the real contents and aims of the works of such prominent economists like Walras and Pareto. But in the end, he takes the stance of criticizing historywhen he denounces the simplifications of Ricardo, or the excessive use of Adam Smith's metaphor of the invisible hand, and their relations with the turn from political economics to mainstream theoretical economics, or recalls the Paretian suspicion about the indifference of theorists to the ways of functioning of the real economy, or Sismondi's attention to the relation between sentiments and rationality. In this sense, his work gives us paradigmatic cases for studying the relation between economics and its history.

By contrast, history of philosophy is not an ancillary part of philosophy, neither institutionally nor in a conceptual perspective. Most of the members of the academic population of philosophers are historians of philosophy. Evenanalytic philosophers, who are often accused of neglecting the philosophers ofthe past by the continental historians of philosophy, make reference to Plato, Aristotle, Descartes, Leibniz, Kant, and the medieval philosophers. Innovative philosophers in the past have always had a double stance towards more ancient philosophers: they criticized their theses and arguments, but at the same time acknowledged their authority and considered as necessary to refer to them in an argumentative relation (even if Descartes claims that he dismisses the medieval scholastic, he uses a lot of its conceptual distinctions).

We can try to draw a parallel between the roles of history of economics and of history of philosophy, just for a first examination. Theoretically innovativeresearchers in the theory of economics – in the previous century – can do without reference to the history of economics. From their perspective, they are makingscience, and for them the role of the history of economics is reduced to the one that any history of science made by scientists (for example, history of physics made by physicists) has: to give information about the success and failures of the past research in the discipline. Innovative philosophers in the same period keep on referring to philosophers of the past, and take them as sources of inspiration. Paying

better attention to the history of economics has often been a stance adopted by people who wanted to criticize the mainstream, but who were not necessarily innovative on the theoretical and formal field. Criticizing the claims of past philosophers was an obligatory step for an innovative philosopher who wants to develop his own perspective (and want to be considered as a great philosopher).

We should not forget that the main theorists (and not only the historians) ineconomics also criticize the limits of the works of their predecessors. But in thiscase criticisms that matter take as their targets the limits and drawbacks of theformalism: they are internal criticisms. On the contrary, the criticisms coming from the historians are mostly external ones – for example the denunciation of the social lack of realism of the economical theory. The criticisms of the innovative philosophers are both internal and external. By contrast, the historians of philosophy do not take the liberty to make external criticisms. They reduce internal criticisms – like the detection of possible incoherence in some reasoning – to temporary interpretative tools, used to raise challenges for the interpretation.

But historians of philosophy intend to let them aside once a philosophical solution has been found. This solution is either internal, giving a more clever interpretation of the doctrine. Or it is external, and it reconstructs the argumentative or rhetorical strategies of the examined author, strategies that historians show to be biased by the constraints of the interactions with other philosophers and with political or religious authorities (see Leo Strauss).

If we simplify a bit, external criticism is forbidden or marginal in the history of philosophy and usual in the history of economics. Innovative theorists in economics limit their criticisms to internal ones, while innovative philosophers make use of both the inconsistencies revealed by their internal criticism and the deficiencies revealed by their external criticisms. The uses of the history of thediscipline in economics and in philosophy seem at cross-purposes.

Another kind of comparison is possible if we do not reduce history of economics or philosophy to a dual perspective. On the one side, we have the puredescription of the evolution of ideas in these domains, on the other, history as criticism. We can focus instead on the conceptual dynamics of the successive evaluations of the theoretical steps of this evolution. This dynamical perspective is not to be confused with 'judged history'. In this kind of history, the historian takes as benchmark and end point the present state of the discipline and makes a retrospective evaluation that depends only on the present trends, the perspective of which is applied to any previous state. On the contrary, we focus on the change between successive trends, the successive revisions of the orientation of the discipline and their relations with each another. At each step, theorists make a change in their perspective. We have to analyse in each case in which respect this implies also a change in the evaluation of previous perspectives, including the changes in the previous interpretations of the past changes. Of course, these changes in evaluation may also imply changes in the status of the discipline.

We want to focus on some examples in which these changes and revision of evaluation and status are related, in economics and philosophy. These relations present a double aspect. On the one hand, the previous attempts to reach a stable state or even an absolute one are demonstrated to fail. On the other, there is a shift from the absolute to relativity and relatedness – not to relativism, but to the implication of previously assumed stable elements into an evolving network of relations. In the end, adopting this dynamical and relational perspective will make us more sensitive to the importance of the relation between vagueness and uncertainty. Both are often neglected companions of the theoretical eff ort, but are nevertheless at the core of both economics and philosophy.

Equilibrium, Emotions and Systematization

We will make reference to two examples in economics that Bridel has analysed:

the general equilibrium and the possible role of emotions and sentiments. Corresponding examples in philosophy are the attempts to systematize philosophy by linking it with mathematics, logics, formalization or only organizing it as a system, and the philosophical treatment of passions and emotions. We cannot get into detailed analyses, and our study will be similar to what Bergson called 'an overview of the history of systems'.

Adam Smith's *Theory of Moral Sentiments* combines these two kinds of examples, as it is a conjunction of philosophy and of problems that are at the roots of economics. Smith proposes not to focus at first on particular categories of emotions or sentiments, but to build a process by which the relation between sentiments and evaluative judgements – including the categorization of different sentiments – will enable a stable structure of evaluations to emerge. Roughly, this process is the following: we share the emotions of other people, but in a less intense and more distant way (this is what Smith calls 'sympathy', that differs in this respect from our 'empathy'). When considering two people in interaction, we partly share their two emotions, even if they are opposite. Our manner of balancing them is a first step towards a comparative evaluation: we will share more intense emotion with the victim of an injustice than with the pleasure of the author of injustice (if there is such a pleasure). These ways of balancing emotions can be shared by other observers, and we learn in this way about the evaluative balance that can resist conflicting evaluations coming from other people. This evaluation has a name: it is the perspective of the 'ideal observer', and we internalize this perspective as the one of our moral self.

This impressive theoretical construction avoids the problem of defining in a fixed way the elementary emotional components and finding a unique systematic way of assembling them (a problem for the conceptual constructions of Descartes, Spinoza or Malebranche). It is, then, remarkable that the famous 'invisible hand' of *An Inquiry into the Nature and the Causes of the Wealth of Nations* is also the indication of a process that allows Adam Smith to avoid having to define from above and in a fixed structure the economical system of a nation, leaving it to the interactions of the people who take care of their own interests. The two works seem to have as a common inspiration the acknowledgment of the failure of top-down systematicity and the sensitivity to the role of comparisons, relations and interactions. As Bridel has noticed, it is a pity that the invisible hand has been taken as the ancestor of the demonstration of a formal equilibrium, and combined with the idea that the existence of such a fixed point in a free market could justify the claim that the market is always the right judge. Paradoxically, Smith has given us in the *Theory of Moral Sentiments* a process that could lead to intersubjectively stable judgements (relatively stable, of course, and presumably not with a unique solution), while the fixed point of the equilibrium of the market cannot be related to a formalized process that can guarantee to reach it even from a neighbouring but not very close state: even in this neighbourhood, instability is still possible, as demonstrated by Debreu and Scarf.1 T is kind of equilibrium can be compared to the one of a pencil that is put on its tip: surely not stable in the usual sense.

History of philosophy and history of economics are mixed in the works of Adam Smith. In each domain, the dynamics that we are interested in – the steps of revision of the conceptualizations – are similar. The philosophical project of building the unique systematic structure of the passions, the project of Descartes, Spinoza and Malebranche, has not given convincing results. They aim to find a systematic and combinatorial order between components (e.g. good and bad) of emotions of passions taken as natural kinds with absolute definitions – for example in Spinoza's *Ethics*. But it leads them to give to some passions a content that does not correspond to the phenomenal and cultural experience (for example, admiration in Descartes's *Treatise of Passions*). It implies normative choices that

can bias the description of emotions. The failure of such systematic and substantive conceptions triggers a conceptual revision that leads Adam Smith to adopt a relational and comparative perspective. Our sentiments of sympathy cannot be defined as combination of good or bad, for us and for others, for the past, the present and the future (as in Descartes and Spinoza). It emerges from the process of balancing between two kinds of emotions. The first is the emotion triggered in a third observer by the situation of one people. The second one the emotion triggered in the same observer by the situation of the partner of this people in the observed interaction. In this way the whole interaction is considered from a third perspective, a perspective that can be shared with other third parties. The failure of conceptions that aim at being systematic and absolute – 'more geometrico' – gives rise, after revision, to a relational and dynamical perspective.

Conceptual Dynamics in Philosophy

Can we see the conceptual dynamics presented by the history of economics and the history of philosophy as a succession of attempts at systematicity and absoluteness of definitions, of failures of these attempts, followed by revisions that lead to more relational and complex perspectives? Yes, if we apply also this dynamics of revision to the systematicity of this dynamical schema itself ! First, each step of the dynamics is *both* the result of a revision and a new attempt at systematicity.

Second, we cannot in advance, when we belong to one period of this dynamics, predict in what way the new present attempt will fail. Third, our retrospective reconstruction of the differences between the steps is itself an attempt to systematicity that can fail and be revised. But this very failure and revision will corroborate the general schema.

The application of the schema to itself has a consequence: the diference between the systematic and absolute tendency and the relational one is not absolute, but itself relational. The relational perspective is not reserved for the modern thinkers and the absolute to the ancient ones. For example, in economics the systematic quest for a general equilibrium implies that the notion of value (the exchange value) can no longer be taken as an absolute one, but is necessarily relative to the exchange relation and its possible disparities – for example, when the supply is bigger than the demand. The absolute is here a relational one.

If we look back to Plato, everybody knows that this innovative philosopher proposes to anchor the thought on Ideas that are supposed to be absolute (kat'auto). But Ideas are relational, as established in the dialog 'The Sophist', in which a prominent place is given to the concept of 'Other'. In the same dual way, Plato has also supported an esoteric doctrine of Ideal Numbers, that gives a systematic and mathematical structure to the fundamental reality, but at the same time he has suggested in Timaeus some ways by which these numbers might be related to the structure of the physical world and not only reserved to ideas in our minds.

Aristotle has criticized this combination of absoluteness and relational structure for its absoluteness. He has argued convincingly that the relation of participation between absolute Ideas and the world of our senses failed to solve the problem of the link between the two. He has himself insisted on the epistemic process that could not always grasp the essence but might just catch a glimpse of it, and he has tried to structure this process as relational, by extracting the essence from a dialectical inquiry that compares the different theses and induces the false ones to eliminate each other. At the same time, he has defined systematic rules of reasoning that we have to follow, once we have some grasp of the essence, in order not to introduce falsity when we start from true propositions.

It has taken a very long time for logicians to criticize this dependence of reasoning on essence (still an absolute) and to anchor it on mathematical structures.

Frege could have hoped to reach some absolute of logic in this new relation, but

the result has been that a logic has become relative to the choice of a variety of mathematical structures (instead of giving a foundation to mathematics, a Hilbertian hope that Gödel has demonstrated to be a failure).

In a similar way, the Kantian Critic was an attempt to take our knowledge as relative to the constraints of our perceptive and epistemic processes, and it has been criticized as taken these constraints as absolute (*a priori* forms of sensitivity and understanding).

The Hegelian construction was an attempt to include every possible relation between concepts in a unique system – an absolute, but made up of interrelatedness, including oppositions and conflicts. Its failure was a result of the claim to uniqueness, as his system was relative to particular choices of specific oppositions.

But maybe the profound cause of this failure was that Hegel has tried to include in his system the very means of detecting the failure and triggering the revision: the conflict between theses and their consequences. A particular system cannot be the unique source of its own revision. The test that leads to revision has to come not only from the previous theory but also from other perspectives and the development of a new kind of relativity has to be innovative.

We cannot hope to escape this constraint of revision by admitting once and for all a relativistic perspective: it will have the same defect, but for opposite reasons, as the Hegelian system: relativism does not offer a hold to change the conceptual perspective. To take another example, the combination of attachment to formal structure and tolerance about the choice of a particular logic adopted eventually by Carnap, which could appear as a reasonable balance between systematicity and relativity, is subjected to a similar criticism: tolerance is not a good thing insofar as it could be used to immunize a system against revision.

The Double Test of Systematization and Revision

One could argue that this succession of failures and revisions shows that the attempt to systematize and to formalize, in economics and in philosophical logic, is a useless step, as it is doomed to failure. This is not true. If the economists and philosophers did not sharpen the distinctions and make explicit the relations between concepts – formalization is the best way to do so, systematization being the second best one – it would be difficult to detect failures: the discrepancies with the evidences could be smoothed out by small changes of the interpretation, changes that would not be salient enough to be considered as negative tests for the theory. Our intuitive interpretations have been built as flexible enough to cope with the small changes of context that often occurs in our practical tasks, and we react mainly to the changes that require alertness because they endanger the success of our everyday practice. As theory goes further than these intuitions, it has to go deeper than them, and it needs more restrictive testing conditions.

Of course, we cannot give a meaning to a failure in a test if we have no idea of how to change our theory in a sensible way. Test and revision require not to be separated. Revision is itself another kind of test: are we able to build a new conceptual framework that makes the failure understandable? Of course, we cannot hope to find the revision that will cope with every problem once and for all. In the same way as systematization and formalization, the construction that the revision consists of implies a restriction in its domain of application, because formalization, but also systematization, requires strict conditions in order to work.

These restrictions make the theory more sensitive to the possible discrepancies with the results of experiments, and prepare it again for the first kind of test, the confrontation with experimental and empirical evidence. Systematization paves the way for revision and the test of revision is a new systematization that paves the way for the following revision. The two kinds of test are the two inseparable sides of the coin of scientific research.

Vagueness and Uncertainty in Economics and Philosophy

This is not to say that scientific research grows in a realm perfectly defined by

strict conditions and with no relation at all with what is the contrary of a crisp definition, the vagueness inherent to the flexibility of our intuitions and to our everyday relation with the world. The problems and questions that are the driving forces of the scientific quest come from the inadequacy of the restricted and strictly formalized realm with the undefined complexity of our environment, which implies both the vagueness of our intuitive conceptualizations together with their flexibility, and the uncertainty of their efficiency.

Economists in the real world have to deal with uncertainty. Most of the time, they reduce it in their theory to risk, which is uncertainty controlled by probabilities (even if Knight has stressed the importance of the difference between risk and uncertainty). Probabilities imply to define a partition of all the possible states of the world relative to the considered problem. As such, they paradoxically imply more fine-grained information about the world than the one that is at our disposal. Vagueness is reduced in this case to the overlap between two parts (or more) of the partition induced by our uncertain knowledge. We have only a subjective probability of identifying the right part. Economists deal with uncertainty by having recourse to this kind of higher order probability (probability between different probabilistic partitions). The process of the Bayesian learning is used in order to refine and ascertain the subjective probability. Economists justify these theoretical choices by the social demand on their discipline: they are requested to predict and control the economical phenomena.

But economists admit at the same time that prediction is very difficult in their domain. In their actual decisions, economic agents do not escape from variations in the weight of probabilities (we overestimate the importance of small probabilities and of certainty). Non-additive probabilities are used in order to deal with this problem. But in the end, uncertainty is not confronted with itself, neither is its relation to vagueness. For example, one of the formal devices used to deal with vagueness, fuzzy logic, uses a graduate notion of membership, requiring one to start from a very fine-grained gradation, the contrary of a vague one.

Philosophers have another way to consider uncertainty and vagueness. They do not try to control them. Philosophers who acknowledge their importance use them as the main sources of sceptical arguments, directed against systematic and dogmatic doctrines. But scepticism is not by itself a sufficient driving force for revising a philosophical theory, as most sceptics do not suggest theoretic innovations (Hume is an exception in this respect). Philosophical revision is triggered by the combination of sceptic attacks of a doctrine (internal attacks) and detections of incoherence between the consequences of the doctrine and the evolution of values and social demands (external undermining).

Economics is also moved by such discrepancies, and not only by the discovery of logical or mathematical dead ends, for example, impossibility theorems about social choice, or the absence of guarantee that an effective procedure of 'tâtonnement' could reach the general equilibrium. More recently, experimental psychology and now experimental economics, as well as their neuro-economic extension, have tried to adjust the theory to the actual behaviour of human people.

But here again the variability of such behaviour and its dependence on the differences of context introduces resisting vagueness.

Philosophy is not directly sensitive to experiments, but its revisions can be triggered when the conceptual framework assumed to be the background of the philosophical discussions is questioned by scientific discoveries (for example the relations between space and time in the theory of relativity). 'Experimental philosophy' admits that experiments in psychology or in economics can have the same kind of impact. If the sceptic arguments are not really source of innovations, their relation with uncertainty and vagueness became such a source when

they are related to the recognition of the complexity of real dynamics. Such a complexity is invoked in the works of Bergson or Nietzsche. This notion has also been renewed in relation to scientific innovations like the analysis of chaotic trajectories (e.g. Popper) or quantum mechanics (e.g. Van Frassen). Experimental measurements appear in this last domain as temporary reductions of the rich complexity of a system of possible states correlated with each other. Here again, the conceptual revision induced by the theoretical interpretations of these results leads to take into account a richer and more extended system of relations.

Conclusion

What can we conclude from this comparison of the history of the dynamics of concepts – understood as the conditions of conceptual revision and innovation – in economics and in philosophy? The two disciplines present a conceptual dynamics of revision and innovation, both associated with an evolution from fixity to relatedness. Up to this time, economics has been more engaged in controlling uncertainty and reducing vagueness than philosophy, which takes them either as the source of sceptical arguments or as an incentive to be sensitive to dynamics and their complexity. One could think that philosophy has to take uncertainty and vagueness as a more central theme, and is the right discipline to do so – as pure scientific disciplines are trying only to reduce them. At the very least, philosophy is led by its conceptual history and dynamics to warn economists against the temptation of taking uncertainty and vagueness as already reduced, at least in the purely theoretical realm. The conceptual history of economics leads it to converge with extensions of economical theory that imply a new kind of relatedness (not relativism). Theoretical economics begins to take into account the complexity of the collective dynamics, its irreducibility to a simple kind of equilibrium, the contextual or path dependency of human decisions, and even the variety of social interactions. At the same time, philosophy becomes more involved in the task of making explicit how the different theoretical perspectives about concepts and values are related to the experimentally observed limitations and peculiarities of actual human interactions. Could we hope for a new kind of convergence between the two histories of philosophy and economics, almost three centuries after the convergence between the two disciplines in the works of Adam Smith?